STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 152344

TO: Thomas Heard **Location: REM-3B21&3C18** **Thursday, May 12, 2005** **Art Unit: 1654** **Case Serial Number: 10/799104**	**From: David Schreiber** **Location: Biotech-Chem Library** **Remsen E01A61** **Phone: 571-272-2526** **David.Schreiber@uspto.gov**

Search Notes

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     (FILE 'HOME' ENTERED AT 09:34:02 ON 12 MAY 2005)

     FILE 'REGISTRY' ENTERED AT 09:34:09 ON 12 MAY 2005
               E PHOSPHOCREATINE/CN
L1           1 S E3

     FILE 'HCAPLUS' ENTERED AT 09:34:34 ON 12 MAY 2005
L2        8699 S L1 OR PHOSPHOCREATINE#
L3        1005 S CHROMOPROTEIN? OR CHROMOPEPTIDE? OR CHROMO(A)PROTEIN? OR CHRO
L4       48521 S CAROTEN?
L5        2362 S ASTAXANTHIN?
L6          11 S L2 AND (L3-L5)

     FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, SCISEARCH, AGRICOLA' ENTERED AT
     09:39:02 ON 12 MAY 2005
L7       29246 S PHOSPHOCREATIN? OR CREATINE(A)PHOSPHAT?
L8        1096 S L3
L9       87020 S CAROTEN?
L10       4669 S ASTAXANTHIN? OR ASTACIN?
L11          2 S L7 AND (L8-L10)

     FILE 'HCAPLUS, BIOSIS, WPIDS' ENTERED AT 09:41:12 ON 12 MAY 2005
L12         12 DUP REM L6 L11 (1 DUPLICATE REMOVED)

=> d ibib abs l12 1-12

L12  ANSWER 1 OF 12  HCAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         2004:352956  HCAPLUS
DOCUMENT NUMBER:          140:363037
TITLE:                    Formulations for topical delivery of bioactive
                          substances and methods for their use
INVENTOR(S):              Vromen, Jacob
PATENT ASSIGNEE(S):       Australia
SOURCE:                   U.S. Pat. Appl. Publ., 11 pp.
                          CODEN: USXXCO
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
     US 2004081681         A1    20040429    US 2002-281062          20021025
     WO 2004039348         A1    20040513    WO 2003-US32638         20031015
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
             PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,
             TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
             FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.:                       US 2002-281062      A  20021025
AB   The invention relates to topical delivery of bioactive agents.  More
     particularly, the invention relates to anhydrous formulations for
     percutaneous absorption.  The invention provides formulations that allow
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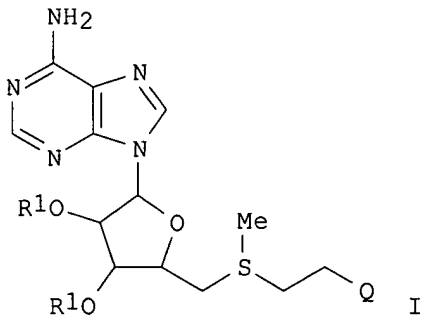
efficient topical delivery of high concns. of bioactive substances for percutaneous absorption. The formulations according to the invention are generally non-irritating to the skin. A preferred topical formulation comprises (1) anhydrous media containing glycerin, propylene glycol, capric/caprylic triglyceride, cetearyl alc., d-tocopherol, ascorbyl palmitate, thiodipropionic acid, BHT, phenoxyethanol, and parabens and (2) bioactive substances containing micronized niacinamide, micronized acetylsalicylic acid, and micronized ascorbic acid.

L12 ANSWER 2 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 2003:319452 HCAPLUS
DOCUMENT NUMBER: 138:314630
TITLE: Orthomolecular sulfo-adenosylmethionine derivatives with antioxidant properties
INVENTOR(S): Wilburn, Michael D.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 17 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003078231	A1	20030424	US 2001-886612	20010622
PRIORITY APPLN. INFO.:			US 2001-886612	20010622

OTHER SOURCE(S): MARPAT 138:314630
GI



I

AB Disclosed are orthomol. sulfo-adenosylmethionine derivative compds., compns., and their uses for effecting a biol. activity in an animal, such as neurochem. activity; liver biol. activity; heart and artery function; cartilage, bone and joint health; stomach and/or intestinal lining resistance to ulceration; immune function; cell membrane integrity; and pain and inflammation. The compds. of the present invention are further useful for preventing or treating diseases or conditions; treating viral infections, infectious diseases, leukemia, and obesity; and reducing the risk of Sudden Infant Death Syndrome in an animal. The compds. of the present invention are I (R1 = H, C1-C10 alkyl, C2-C10 alkenyl or alkynyl, -C(O)R2; R2 = C1-C10 alkyl, C2-C10 alkenyl or alkynyl; Q = -C(NH3)C(O)AX, -C(COOH)NHX; A = O, N; X = a defined reaction product) or pharmaceutically acceptable salt, ester or solvate thereof. α-(S-adenosylmethionine)-

O-tocopherol was prepared from N-Acetyl-S-benzyl-L-homocysteine, α-tocopherol, and 5'-O-p-Tolylsulfonyladenosine.

L12 ANSWER 3 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:400565 HCAPLUS
DOCUMENT NUMBER: 138:19071
TITLE: A rapid screening assay for antioxidant potential of natural and synthetic agents in vitro
AUTHOR(S): Srinivasan, Praveen; Vadhanam, Manicka V.; Arif, Jamal M.; Gupta, Ramesh C.
CORPORATE SOURCE: Department of Preventive Medicine and Environmental Health, University of Kentucky Medical Center, Lexington, KY, 40536-0305, USA
SOURCE: International Journal of Oncology (2002), 20(5), 983-986
CODEN: IJONES; ISSN: 1019-6439
PUBLISHER: International Journal of Oncology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The identification of chemopreventive agents with antioxidant potential was explored by using a Cu2+-mediated Fenton-type reaction to cause oxidative DNA damage, with lesion detection by 32P-postlabeling. Of 16 naturally occurring and synthetic compds. studied, several inhibited the formation of 8-oxo-2'-deoxyguanosine (8-oxodG), a marker of oxidative DNA lesions; ellagic acid, a polyphenol found in berries, gave maximal (>80%) inhibition of 8-oxodG formation. However, a well-known tea polyphenol, epigallocatechin gallate, along with silymarin and DL-sulforaphane, exhibited a pro-oxidant effect, with a 50-70% increase in 8-oxodG induction. In general, the results agreed with the antioxidant/pro-oxidant activities of these compds. reported in the literature, rendering this in vitro screening assay useful for rapidly and cost-effectively determining the antioxidant potential of compds.
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 4 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:880915 HCAPLUS
DOCUMENT NUMBER: 134:28744
TITLE: Compositions containing creatine in suspension
INVENTOR(S): Howard, Alan Norman; Harris, Roger Charles
PATENT ASSIGNEE(S): The Howard Foundation, UK
SOURCE: PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 8
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000074500	A1	20001214	WO 2000-GB2091	20000601

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

ZA 9710788	A	19980612	ZA 1997-10788	19971201
US 6168802	B1	20010102	US 1999-324119	19990602
US 6274161	B1	20010814	US 1999-419922	19991018
CA 2374102	AA	20001214	CA 2000-2374102	20000601
AU 2000050913	A5	20001228	AU 2000-50913	20000601
AU 777053	B2	20040930		
EP 1180944	A1	20020227	EP 2000-935367	20000601
EP 1180944	B1	20040211		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
BR 2000011244	A	20020305	BR 2000-11244	20000601
JP 2003501057	T2	20030114	JP 2001-501049	20000601
NZ 515677	A	20031031	NZ 2000-515677	20000601
AT 259162	E	20040215	AT 2000-935367	20000601
NO 2001005849	A	20020128	NO 2001-5849	20011130
HK 1043513	A1	20040611	HK 2002-105228	20020716

PRIORITY APPLN. INFO.:

US 1999-324119	A	19990602
US 1999-419922	A	19991018
GB 1996-11356	A	19960531
US 1997-866517	A2	19970530
WO 2000-GB2091	W	20000601

AB Disclosed is a composition for human consumption, comprising creatine suspended in an edible supporting matrix.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 5 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:352309 HCAPLUS

DOCUMENT NUMBER: 125:25998

TITLE: The effect of simvastatin treatment on natural antioxidants in low-density lipoproteins and high-energy phosphates and ubiquinone in skeletal muscle

AUTHOR(S): Laaksonen, Reijo; Jokelainen, Kalle; Laakso, Juha; Sahi, Timo; Harkonen, Matti; Tikkanen, Matti Juhani; Himberg, Jaakko-Juhani

CORPORATE SOURCE: Department Clinical Pharmacology, University Helsinki, Helsinki, 00250, Finland

SOURCE: American Journal of Cardiology (1996), 77(10), 851-854
CODEN: AJCDAG; ISSN: 0002-9149

PUBLISHER: Excerpta Medica

DOCUMENT TYPE: Journal

LANGUAGE: English

AB It has been hypothesized that treating hypercholesterolemic patients with statins will lead not only to a reduction in cholesterol, but also to inhibited synthesis of other compds. which derive from the synthetic pathway of cholesterol. In theory, this could further lead to ubiquinone deficiency in muscle cell mitochondria, disturbing normal cellular respiration and causing adverse effects such as rhabdomyolysis. Furthermore, ubiquinone is one of the lipophilic antioxidants in low-d. lipoprotein (LDL), and therefore it has also been hypothesized that statin treatment will reduce the antioxidant capacity of LDL. We investigated the effect of 6 mo of simvastatin treatment (20 mg/day) on skeletal muscle concns. of high-energy phosphates and ubiquinone by performing biopsies in 19 hypercholesterolemic patients. Parallel assays were performed in untreated control subjects. The muscle high-energy phosphate and ubiquinone concns. assayed after simvastatin treatment were similar to those observed at baseline and did not differ from the values obtained in control subjects at the beginning and end of follow-up. These results do not support the hypothesis of diminished isoprenoid synthesis or energy

generation in muscle cells during simvastatin treatment. Furthermore, the results of anal. of antioxidant concns. in LDL before and after simvastatin treatment indicate that the antioxidant capacity of LDL is maintained in simvastatin-treated patients.

L12 ANSWER 6 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1987:594592 HCAPLUS
DOCUMENT NUMBER: 107:194592
TITLE: Systems to preserve living tissue and cells
INVENTOR(S): Swartz, Mitchell R.
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 5 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4681839	A	19870721	US 1982-422038	19820923
PRIORITY APPLN. INFO.:			US 1982-422038	19820923

AB A system to preserve both living tissue that has been severed from its host or living cells to be stored, cloned, or hybridized comprises (a) a gas-permeable bag or other container to store the tissue, a quantity of liquid, and a biscuit and further means to maintain a sterile environment; (b) the biscuit includes an electrolyte to help maintain cellular internal environment of the tissue and a pH buffer and is soluble in the liquid so as to provide a quasistatic biochem. environment; and (c) means to maintain the liquid and tissue at a temperature above the f.p. of the tissue.

L12 ANSWER 7 OF 12 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 1977:172483 BIOSIS
DOCUMENT NUMBER: PREV197763067347; BA63:67347
TITLE: CHARACTERISTICS OF ENERGY METABOLISM IN THE MYO CARDIUM DURING ARTIFICIAL HYPO THERMIA.
AUTHOR(S): VERBOLOVICH V P; TEPLOVA L L; NURAKHOVA T G; MALISHEVSKAYA N A
SOURCE: Kardiologiya, (1976) Vol. 16, No. 6, pp. 84-88.
CODEN: KARDA2. ISSN: 0022-9040.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: Unavailable
AB The effect of cooling and subsequent rewarming on the tissue respiration of canine hearts was studied during polycomponent ether-O2 anesthesia. Tests included determination of the dehydrogenase activity of the citrate cycle, content and activity of **chromoproteins**, respiratory rate of the mitochondria on succinate, glutamate and ketoglutarate, glycogen content, phosphorylase, hexokinase and lactate dehydrogenase activities, and lactate, pyruvate, adenyl nucleotides and **creatine phosphate** contents. Significant changes were noted in the contents and activities of these substances: acceleration of mitochondrial respiration, reduced energy regulation of respiration, and decreased amount of the adenyl components. Under artificial hypothermia **chromoprotein** biosynthesis was probably enhanced, resulting in an increased terminal respiration and conformational rearrangements of the enzymes connected with membranes.

L12 ANSWER 8 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1975:407777 HCAPLUS

DOCUMENT NUMBER: 83:7777
TITLE: Effect of vitamins C and E on carbohydrate and phosphorus metabolism in chicks
AUTHOR(S): Fedorov, A. S.
CORPORATE SOURCE: Penz. S-kh. Inst., Penza, USSR
SOURCE: Vitam. Pitan. S-kh. Zhivotn. (1973), 331-41. Editor(s): Tomme, M. F. "Kolos": Moscow, USSR. CODEN: 29SJA8
DOCUMENT TYPE: Conference
LANGUAGE: Russian
AB A mixture of vitamins C and E exerted the most favorable effects on carbohydrate and P metabolism in chicks by increasing tissue levels of adhesive nucleotides and creatine phosphate and activities of glutathione and aldolase. Glycogenesis was also stimulated resulting in the accumulation of glycogen. Chickens given 150 g of vitamin C and 60 g of vitamin E/ton of feed had the highest weight and the highest vitamin A (I) content in the liver and hens, and had the highest I and **carotene** content in the egg yolk.

L12 ANSWER 9 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1972:432961 HCAPLUS
DOCUMENT NUMBER: 77:32961
TITLE: Effect of zinc on the chemical composition of rabbit meat
AUTHOR(S): Gutkovich, Ya. L.
CORPORATE SOURCE: Ul'yanovsk. S.-Kh. Inst., Ulyanovsk, USSR
SOURCE: Myasnaya Industriya SSSR (1972), (4), 39-40 CODEN: MYISAM; ISSN: 0027-5492
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Rabbits, 8-9-months-old, were fed for 6 months with rations supplemented with cooked protein, Ca, P, **carotene**, and 2.69 mg. Zn. The addition of Zn increased their weight by 7.3%. Anal. of the chemical composition of their meat revealed 41.2% increased levels of creatine phosphate. Zn addition intensified protein metabolism.

L12 ANSWER 10 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1971:73448 HCAPLUS
DOCUMENT NUMBER: 74:73448
TITLE: Metabolism in laying chicks and the quality of the eggs in relation to the stimulation of egg production using monoethanolamine
AUTHOR(S): Kamalyan, G. V.; Karadzhyan, A. M.; Kanayan, L. G.
CORPORATE SOURCE: USSR
SOURCE: Trudy Erevanskogo Zooveterinarnogo Instituta (1968), No. 29, 99-103 CODEN: TEZVAJ; ISSN: 0371-6562
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The egg production of laying chickens fed ethanolamine (5 mg/kg weight) was increased by 15%. The tissues contained increased amts. of ATP, creatine phosphate, ethanolamine, **carotenoids**, and phospholipids. The weight of the eggs remained unchanged. In yolk, the amount of phospholipids was increased, especially that of cephalins and inositol phosphatides, as well as the content of ATP, ethanolamine, and **carotenoids**.

L12 ANSWER 11 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1964:427155 HCAPLUS
DOCUMENT NUMBER: 61:27155

ORIGINAL REFERENCE NO.: 61:4746c-f
TITLE: Energy supply of yeast cells under anaerobic metabolic conditions
AUTHOR(S): Nordheim, W.
CORPORATE SOURCE: Deutsch. Akad. Wiss., Berlin
SOURCE: Monatsschr. Brauerei (1961), 14, 71-80
From: CZ 1962(42), 15274.
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Previously, it was assumed that the energy required for the proliferation of yeast cells could be produced under anaerobic conditions by fermentation. Expts. with various yeast-cell materials showed that fermentation alone did not have the energetic force to maintain the basic biosynthetic functions of the cells (reproduction, protein synthesis, phosphate metabolism) or to produce biosynthetically utilizable energy. While the exclusively aerobic types of yeast cells (Torula) do not synthesize cell material at all with a lack of O, the fermenting yeasts and fermentors grown under aerobic conditions are fully able to carry on anaerobic synthetic cell reactions; e.g., to propagate without O or to transfer phosphate from the outside, through the cell membrane, into the medium. The power for this anaerobic synthesis exists only so long as the cells have at their disposal a corresponding anaerobic energy potential. This is exhausted in the course of progressive anaerobic passage growth (so-called diminution growth; expts. with Saccharomyces carlsbergensis) more and more, until finally anaerobic cytostasis (anabiosis) occurs, in which all biosynthetic functions are latent, without simultaneous decrease in the fermentation capacity. This state of anabiosis can be destroyed by O2 or by O2-free boiling and Et2O exts. from yeasts or from animals and glandular tissues or through lipid-type substances (phosphatides, sterols, cholesterol, stigmasterol, ergosterol, and **carotenoids**). In glycerol phosphatides, unsatd. fatty acids form the actual effective groups, while sterols, as such, are inhibitory. Adenosine tri- and diphosphates, **phosphocreatine**, phosphoarginine, acetylphosphate, acetyl coenzyme A, and the redox catalysts, diphosphopyridine nucleotide and α-lipoic acid, were not effective. Certain cell metabolites are assumed to occur in the yeast cells. These are specifically capable of electron transfer in conjunction with effective anaerobic energy production, in accordance with an oxidation-reduction regulating mechanism. The asynthetic process of fermentation and the anaerobic synthetic process, released through O or O-free cell exts., differ basically. The latter presents a new source of energy, which is of great significance in the energy provision of fermenting yeast cells under anaerobic conditions.

L12 ANSWER 12 OF 12 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1933:39090 HCAPLUS
DOCUMENT NUMBER: 27:39090
ORIGINAL REFERENCE NO.: 27:3530g-i,3531a-b
TITLE: The pigments of lobster (Astacus gammarus L.) and their parent substance, astacin
AUTHOR(S): Kuhn, Richard; Lederer, Edgar
SOURCE: Ber. (1933), 66B, 488-95
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB The pigments in the shell, hypodermis and eggs of the Norwegian lobster are derived, by esterification and coupling of the esters with albumin, from astacin (I). The brown-black or green-black pigments of the shell and eggs cannot be extracted by organic solvents without change; they are also destroyed by heat or dilute HCl. When the lobster shell is decalcified by 0.2 N HCl, the brown-black **chromoprotein** is converted into a red

astacin ester, which is extracted by Me2CO, giving an orange-red solution After dilution of this solution with H2O the pigment is extracted with benzine. Upon saponification with alc. NaOH and addition of H2O, the presence of 2 pigments is apparent, one in the benzine layer, the other in the alc. layer. The yellow benzine solution contains about 1% of the total pigment and shows absorption bands at 483 and 448 mμ; this pigment is probably **carotene**. The deep red alc. solution shows one broad absorption band at 350-450 mμ. On acidifying with AcOH I was precipitated and was obtained in violet crystals by dissolving it in pure C5H5N and adding a few drops of H2O. The red lipochrome of the hypodermis gave upon extraction with Me2CO a red astacin ester, which when saponified with alc. NaOH and acidified with AcOH gave I. An ovary filled with eggs was pulverized in Me2CO, whereupon the green color of the **chromoprotein** changed to red and the pigment dissolved. After 2 more extns. with Me2CO, the exts. were covered with benzine and H2O was added to force the pigment into the upper layer. This was washed with H2O, and shaken with 90% MeOH, whereupon almost all of the pigment went into the lower layer. The pale yellow benzine layer contained **carotene**; the MeOH solution, showing an absorption band with a maximum at 490 mμ, contained a blue-violet ovo-ester of I, from which I was obtained by saponifying with alc. NaOH and acidifying with AcOH, From lobsters weighing about 500 g. the following quantities of I were obtained: 3-4 mg. from the shell, 7-8 mg. from the hypodermis, and 2-3 mg. from the eggs. I crystallizes in violet needles. Its absorption spectrum has an apparently homogeneous absorption band with a maximum at 500 mμ. I is a highly unsatd. carboxylic acid (cf. Verne's statement Arch. morph. gen. exper. 16, 1(1923) that the blue-black pigment of lobster shell is an albumin compound of a red hydrocarbon isomeric with **carotene**). Its formula is C27H32O3. I is probably aliphatic in nature. When pure it is very stable toward O of the air. In daily quantities of 30 γ it shows no effect on the growth of rats nourished on a diet free from vitamin A.

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     (FILE 'HOME' ENTERED AT 09:34:02 ON 12 MAY 2005)

     FILE 'REGISTRY' ENTERED AT 09:34:09 ON 12 MAY 2005
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L1            1 S E3

     FILE 'HCAPLUS' ENTERED AT 09:34:34 ON 12 MAY 2005
L2         8699 S L1 OR PHOSPHOCREATINE#
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L6           11 S L2 AND (L3-L5)

     FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, SCISEARCH, AGRICOLA' ENTERED AT
     09:39:02 ON 12 MAY 2005
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L8         1096 S L3
L9        87020 S CAROTEN?
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     FILE 'HCAPLUS, BIOSIS, WPIDS' ENTERED AT 09:41:12 ON 12 MAY 2005
L12          12 DUP REM L6 L11 (1 DUPLICATE REMOVED)
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